Flagellates in Certain Queensland Plants.

PRELIMINARY NOTES.

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TRYPANOSOMES have been known to occur in the milky juice of Euphorbiaceous plants since 1909, when Donovan suggested the name *Phytomonas* for them, and Lafont in Mauritius described the first species, *Phytomonas davidi*, found in the latex of *Euphorbia pilulifera*; since then others have been described. (*See* "Protozoology" by C. M. Wenyon.)

No one, so far as I know, has hitherto found Flagellates in Australian plants.

There is a species in the Asclepiadaceous plants *Sarcostemma australe* and *Hoya australis*, and a larger species in *Secomone elliptica*, and a different kind again in *Ficus scabra*.

There can be no doubt that many species await discovery in Australia, for out of a dozen plants with milky juice examined by me, four have been seen to harbour them. It is well known that insects take the role of intermediary host for *Phytomonas*. There is a bug (*Oncopeltus quadriguttatus*, Fabr.)* constantly in association with *Hoya australis*, living on the milky juice of the plant; it will also suck the juice of *Sarcostemma*.

I found Flagellates in the intestines of these bugs; a larger form than that in the juice of the plant, which is what occurs in respect of other species of *Phytomonas*, the life-histories of which have been worked out.

The dimensions of the *Phytomonas* found in *Hoya* and *Sarcostemma* are:—Body, $17\mu \times 2\mu$; flagellum, 18μ.

Trophonucleus situated considerably nearer the anterior end than centre of body.

* Identified by Mr. Anthony Musgrave. He remarks, however, that it is not quite typical.